REMARKS

Applicant is filing this Amendment and Response in response to an Official Action dated June 29, 2006. At the time of the Official Action, claims 1-42 were pending. In this Response and Amendment, claim 42 is canceled, and claims 1 and 23 are amended. Accordingly, claims 1-41 are currently pending and believed to be in condition for allowance. In view of the following remarks, Applicant respectfully requests reconsideration and allowance of all pending claims.

The Rejection Under 35 U.S.C. § 102(b)

In the Office Action, the Examiner rejected claims 1, 2, 6, 10- 13, 17, 21-24, 26, 30-32, 36, and 40-42 under 35 U.S.C. § 102(b) as being anticipated by Houlberg et al (U.S. Patent No. 5,887,198, hereafter referred to as "the Houlberg reference"). The Examiner also rejected claims 1-3, 6-14, 17-24, 26-33, and 36-42 as being anticipated by Wunderlich (U.S. Patent No. 6,122,679, hereafter referred to as "the Wunderlich reference"). Applicant respectfully traverses these rejections.

Anticipation under section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). In order to maintain a proper rejection under section 102, a single reference must teach each and every element or step of the rejected claim, else the reference falls under section 103. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). Accordingly, Applicant need only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter.

The prior art reference also must show the *identical* invention "*in as complete detail as contained in the ... claim*" to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989).

First rejection under § 102(b)

With respect to the rejection of claims 1, 2, 6, 10- 13, 17, 21-24, 26, 30-32, 36, and 40-42 under Section 102 based on the Houlberg reference, the Examiner stated:

> As per **Claims 1, 12, 23, 31 and 42** Houlberg teaches in figures 1-3 a system for controlling peripheral devices in a computer system, the system for controlling peripheral devices **[Fig. 1, Element 24 and 26]** comprising:
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> (a) Microcontroller **[Fig. 2, Element 10, "Embedded PC server"]** that provides a plurality of device interfaces **[Fig. 3, Element 40 & 42, "PCMCIA Interface"]** each of the device interfaces being adapted to support a peripheral device **[Fig. 3, Elements 44-50]**. and a communication interface mat is adapted to allow communication with the peripheral devices via the plurality of device interfaces **[Fig. 1, Element 28, "Ethernet Interface"** - Ethernet interface provides the Client, Fig. 2, element 12, communication to The peripheral devices, Fig. 1, Elements 24, 26, through device Interface Fig. 1, Element 22]
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> (b) Device that stores programming instructions **[Fig. 2, Element 16]** to initialize the microcontroller separately from the initialization of the computer system **[Col. 3, Lines 37-42**— Computer system (Fig. 2, Element 12) is a separate PC that is *initialized independently* to the Embedded PC FTP serve, Fig. 2, Element 10] The controller 10 enables communication of peripheral device and computer and therefore avoids conflict and reduces resource consumption.

Office Action, p. 4.

Applicant respectfully traverses the rejection. In the present case, the Houlberg reference does not anticipate Applicant's claims under Section 102 because every element of the claimed invention is not identically shown in the Houlberg reference. Specifically,

independent claim 1 recites a system for "controlling peripheral devices *in a computer system*" including "a *microcontroller* that provides a plurality of device interfaces." (Emphasis added). Independent claim 12 recites "[*a*] *computer* system" including "a *microcontroller* that is connected to the memory controller, the microcontroller providing a plurality of device interfaces." (Emphasis added). Independent claim 23 recites "a method of controlling peripheral devices *in a computer system*" including "initializing a *microcontroller* that includes a plurality of device interfaces." (Emphasis added). Finally, independent claim 31 recites a "[a] system for controlling peripheral devices *in a computer system.*" (Emphasis added).

In sharp contrast, the Houlberg reference discloses a system in which:

> [A]n embedded PC FTP server which is a bridge between an FTP client computer and a pair of PCMCIA memory cards allowing for communication and data transfer between the client computer and the memory cards.
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> The server includes an ethernet interface which connects the server to the ethernet bus which is connected to the client computer. The server has a PCMCIA interface module which allows the FTP client computer to communicate with the PCMCIA memory card and thereby transfer data to the memory cards and retrieve data from the memory cards.
>
> The server also includes PC DOS Computer which enables and controls the functions and operation of the PCMCIA interface and ethernet interface using a computer software program. The PC DOS Computer has a two megabyte hard drive which has the computer software program stored therein.
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> Houlberg, col. 2, lines 32-48.

Thus, the Houlberg reference does not disclose a "microcontroller that provides a plurality of device interfaces" as recited in independent claims 1, 12, and 23. As discussed in the current application, a microcontroller may be defined as a "general purpose processor similar to a microprocessor that may be programmed to perform a specific task within a system." In

contrast, the Houlberg reference discloses an entire FTP server, including a "PC DOS Computer" as a device bridge, an Ethernet interface and a PCMICIA interface.

Moreover, the Houlberg reference does not disclose "controlling peripheral devices *in a computer system*," as recited in the preamble of independent claims 1, 23, and 31, nor does it disclose "*a computer system*, comprising...a microcontroller...providing a plurality of device interfaces" as recited in independent claim 12. In sharp contrast, the Houlberg reference discloses "an embedded FTP server which is a bridge between an FTP client computer and a pair of PCMCIA memory cards." *See* Houlberg, col. 2, lines 31-36. Additionally, "an Ethernet bus 14 connects FTP client computer 12 to FTP server 10 allowing for communication between FTP client computer 12 and FTP server 10." *See* Houlberg, col. 3, lines 27-30. The Houlberg reference discloses a system that includes multiple FTP client computers on an Ethernet network to communicate with memory cards using an FTP server 10. The above-recited claims provide for "controlling peripheral devices in a computer system," not managing device access from one computer across an Ethernet network to a PCMCIA interface connected to an FTP server.

For at least these reasons, Applicant respectfully submits that independent claims 1, 12, 23, and 31 (and the claims dependent thereon) are not anticipated by the Houlberg reference. Accordingly, Applicant respectfully requests the withdrawal of the rejection of claims 1, 12, 23, and 31 and the claims that depend therefrom under Section 102 based on the Houlberg reference.

Second rejection under § 102(b)

With respect to the rejection of independent claims 1-3, 6-14, 17-24, 26-33, and 36-42 under Section 102 based on the Wunderlich reference, the Examiner stated:

> **As per Claims 1, 12, 23 and 31**, Wunderlich teaches a system for controlling peripheral devices in a computer system, the system for controlling peripheral devices **[Fig.1, Element 85, 90, 92]** comprising:
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> (a) Microcontrorler **[Fig. 1, Element 10]** that provides a plurality of device interfaces **[Fig. 2 Element 130, 140, 145, 135 155, 170]** each of the device interfaces being adapted to support a peripheral device **[Fig. 2, "USB Port, IDE"]**, and a communication interface that is adapted to allow communication with the peripheral devices via the plurality of device interlaces **[Fig. 2 Element 185, "PCI Target Interface"]**
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> (b) Device that stores programming instructions to initialize the microcontroller separately from the initialization of the computer system **[Fig. 1, Element 91]**.
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> Office Action, p. 5.

Applicant respectfully traverses the rejection. The Wunderlich reference does not anticipate Applicant's claims under Section 102 because it does not identically show every element of the claimed invention. For example, independent claims 1, 11 and 31 recite "a device that stores programming instructions *to initialize the means for interfacing separately from the initialization of the computer system.*"

In regards to the Wunderlich reference, the Examiner pointed to the "BIOS ROM 91" as anticipating the above-recited claim features. *See* Office Action, p. 5. The function of the BIOS ROM 91 is not defined in the Wunderlich reference, but is listed as one of "various peripheral devices...coupled to each of these busses." *See* Wunderlich, col. 6, lines 41-46. The BIOS ROM 91 is therefore not a device that can "initialize the means for interfacing separately from the initialization of the computer system," but another possible peripheral

device coupled to a selection of busses which are turn coupled to the bridge logic device 100. *See* Wunderlich, col. 6, lines 30-40. Accordingly, neither the BIOS ROM 91 nor any other feature in the Wunderlich reference discloses a "device that stores programming instructions to initialize the means for interfacing separately from the initialization of the computer system" as recited in independent claims 1, 11 and 31.

Additionally, independent claims 1, 11 and 23 recite the use of "a microcontroller" having "a plurality of device interfaces." In the Office Action, The Examiner cited "Fig. 1, Element 10" in the Wunderlich reference as disclosing the microcontroller. In contrast, however, the Wunderlich reference defines element 10 as "a computer system 10." *See* Wunderlich, col. 4, line 66. As discussed above with regards to the Houlberg reference, a microcontroller is distinct from a computer system. Accordingly, use of "a microcontroller" having "a plurality of device interfaces," as claimed in the present application, is not anticipated by the Wunderlich reference, either through disclosure of computer system 10 or any other element

As such, Applicant respectfully submits that independent claims 1, 12, 23, and 31 (and the claims dependent thereon) are not anticipated by the Wunderlich reference. Accordingly, Applicant respectfully requests the withdrawal of the rejection of claims 1, 12, 23, and 31 and the claims that depend therefrom under Section 102 based on the Wunderlich reference.

The Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 3-5, 7-9, 14-16, 18-20, 27-29, 33-35, and 37-39 under 35 U.S.C. § 103(a) as being unpatentable over Houlberg et al. (U.S. Patent No. 5,887,198, hereafter referred to as "the Houlberg reference") in view of Wunderlich (U.S. Patent No. 6,122,679, hereafter referred to as "the Wunderlich reference"). Additionally, the Examiner rejected claims 4, 5, 15, 16, 25, 34 and 35 as being unpatentable over the Wunderlich reference. Applicant respectfully traverses these rejections.

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (B.P.A.I. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d. 1430 (Fed. Cir. 1990). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985).

First Rejection under § 103

With respect to the rejection of claims 3-5, 7-9, 14-16, 18-20, 27-29, 33-35, and 37-39 under 35 U.S.C. § 103 as being rendered obvious by the Houlberg reference in view of the Wunderlich reference, the Examiner stated:

> **As per Claims 3, 4, 5, 14, 15, 16, 33, 34 and 35,** Houlberg teaches the limitations of Claims 1, 12, 23 and 31, as well as communication interfaces that include SCSI, MIL-STD-1 153 and Ethernet interface. Houlberg however fails to teach communication interfaces where the interface specifically is one of either Peripheral Component Interlace ("PCI") interface, Extended Peripheral Component Interface ("PCI-X") interface or Streamlined Advanced Programmable Interrupt Controller ("SAPIC") interface. Wunderlich teaches the limitation of having the communication interface as being Peripheral Component Interface ("PCI") interface **[Figure. 2, Element 185]**.
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> Office Action, p. 7.

Applicant respectfully submits that the rejection of claims 3-5, 7-9, 14-16, 18,-20, 27-29, 33-35, and 37-39 under Section 103 is defective for at least the reasons set forth above with respect to the rejection of independent claims 1, 11, 23 and 31 under Section 102. As discussed above with reference to 35 U.S.C. § 102(b), the Houlberg reference does not disclose "a microcontroller" as recited in claims 1, 11, and 23, nor does it disclose "controlling peripheral devices in a computer system as recited in claims 1, 23, and 31. The Wunderlich reference does nothing to obviate the deficiencies of the primary reference discussed above with regard to the base claims. The cited combination does not disclose or suggest all of the elements of the claimed invention, and thus, cannot possibly render the claimed subject matter obvious. Accordingly, Applicant respectfully requests withdrawal of the Examiner's rejection and allowance of claims 3-5, 7-9, 14-16, 18,-20, 27-29, 33-35, and 37-39.

Second Rejection under § 103

With respect to the rejection of claims 4, 5, 15, 16, 25, 34 and 35 under 35 U.S.C. § 103 as being rendered obvious by Wunderlich, the Examiner stated:

> **As per claims 4, 5, 15, 16, 25, 34 and 35**, Wunderlich teaches the limitations of Claim 1, 12, 23 and 31 in addition to a PCI interlace **[Fig. 2, Element 185]**. Wunderlich fails to teach a system wherein the communication interface is also PCI-X interface and SAPIC.
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> Office Action, p. 8.

Applicant respectfully submits that the rejection of claims 4, 5, 15, 16, 25, 34 and 35 under Section 103 is defective for at least the reasons set forth above with respect to the rejection of independent claims 1, 11, 23 and 31 under Section 102. As discussed above with reference to 35 U.S.C. § 102(b), the Wunderlich reference does not disclose "a microcontroller" as recited in claims 1, 11, and 23, nor does it disclose "a device that stores programming instructions to initialize the means for interfacing separately from the initialization of the computer system" as recited in claims 1, 12, and 31. Accordingly, the Wunderlich reference cannot render Applicant's claims obvious. Therefore, Applicant respectfully asserts that the rejections of claims 4, 5, 15, 16, 25, 34 and 35 under Section 103 are erroneous and should be withdrawn.

Claim Rejections under 35 U.S.C. § 112, First Paragraph

The Examiner rejected claim 42 under U.S.C. § 112, First Paragraph because the specification, while being enabling for a computer system that comprises a microcontroller that functions as a south bridge, does not reasonably provide enablement for a single microprocessor to avoid conflict and reduce power consumption. Although the Applicant does not concede the correctness of the rejection of claim 42, claim 42 has nonetheless been

canceled to further prosecution of the application. Applicant reserves the right to substantively contest the rejection in a continuing application.

Claim Rejections under 35 U.S.C. § 112, Second Paragraph

The Examiner rejected claims 1, 23, and 42 under U.S.C. § 112, Second Paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Although Applicant does not necessarily concede the correctness of the Examiner's objection, Applicant has amended claims 1 and 23 and canceled claim 42. In view of these amendments, Applicant respectfully requests the Examiner withdraw the rejection of claims 1, 23 and 42 under Section 112, Second Paragraph.

Conclusion

In view of the remarks set forth above, Applicant respectfully requests reconsideration of the Examiner's rejections and allowance of all pending claims 1-41. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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